

Application No. 10/513,961

Reply to Office Action

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Restriction Requirement

The Office Action has set forth a restriction requirement. In particular, the Office Action requires restriction between the following groups of claims:

- (I) claims 1-15, 37-42, 47-51, 64, 65, 69, 70, and 74-77, directed to antiviral proteins and methods of using the antiviral proteins;
- (II) claims 16-32, 37-40, 43-46, 66-68, 69, and 71-77, directed to nucleic acids encoding the antiviral proteins and methods of using the nucleic acids; and
- (III) claims 52-63, directed to anti-scytovirin antibodies and methods of using the antibodies.

Species Election Requirement

The Office Action also requires that Applicants elect species with respect to the examination of certain dependent claims.

If Group I is elected, the Office Action requires that Applicants elect a single species for prosecution by selecting one member from each of groups (i)-(iv):

- (i) With respect to claims 3, 18, 37-40, 47-51, and 64-77, the Office Action requires election of (a) a conservative substitution (b) a neutral substitution, (c) an N-terminal addition, or (d) a C-terminal addition.
- (ii) With respect to claims 38-40, 74, and 75, the Office Action requires election of (a) HIV, (b) influenza, or (c) Ebola.
- (iii) With respect to claims 4-7, 8-15, 37-51, 64-77, the Office Action requires election of (a) a fusion protein of the scytovirin or (b) a conjugate of the scytovirin, wherein if the conjugate (b) is selected, Applicants also must select an effector component from (1) PEG, (2) dextran, (3) a toxin, (4) an immunological reagent, (5) an antiviral agent, or (6) a support matrix.

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(iv) With respect to claims 37-51 and 64-67, the Office Action requires election of (a) the treatment of a host, (b) the inhibition of a virus in a biological sample, or (c) the inhibition of a virus on an inanimate object, wherein if the treatment of a host (a) is selected, Applicants also must specify whether the host is avian or human and whether the mode of administration is nasal, inhaled, or parenteral.

If Group II is elected, the Office Action requires that Applicants elect a species for prosecution by selecting one member from each of groups (i)-(iv):

(i) With respect to claims 3, 18, 37-40, 47-51, and 64-77, the Office Action requires and election of (a) a conservative substitution, (b) a neutral substitution, (c) an N-terminal addition, or (d) a C-terminal addition.

(ii) With respect to claims 38-40, 74, and 75, the Office Action requires an election of (a) HIV, (b) influenza, or (c) Ebola.

(iii) With respect to claims 40, 76, and 77, the Office Action requires an election of (a) human or (b) avian and wherein the composition is administered (i) nasally, (b) by inhalation, or (c) parenterally.

(iv) With respect to claims 22, 23, 25, 26, 28, 29, 31, 32, 45, 46, 68, and 73, the Office Action requires an election of (a) bacterial cells, (b) yeast cells, or (c) homologous to host cells.

Applicants' Election with Traverse

In response to the restriction requirement, Applicants elect, with traverse, the claims of Group I (i.e., claims 1-15, 37-42, 47-51, 64, 65, 69, 70, and 74-77).

Regarding the election of species for the dependent claims, Applicants elect, with traverse, the following species:

(i) an embodiment wherein the variant has a (a) conservative mutation (claims 3, 6, 7, 10, 11, 37-42, 47-51, and 64, 65, 69, 70, and 74-77);

(ii) an embodiment wherein the virus is (a) HIV (claims 38-40 and 64-73);

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(iii) an embodiment wherein the composition comprises (a) a fusion protein of the scytovirin (claims 4-7, 12-15, 37-41, 47-50, 69, and 74-77); and

(iv) an embodiment wherein the method comprises (b) the inhibition of a virus in a biological sample (claims 47, 48, 50, and 51).

While Applicants have provided an election for the aforementioned species, the species election merely is intended to aid the Examiner in the search and examination of the present patent application. The election is by no means indicative of Applicants' willingness to ultimately limit the claims of the present patent application to these species. Consistent with an election of species requirement and as acknowledged in the Office Action, Applicants will be entitled to consideration of other species falling within the generic claims if the elected species are found to allowable.

Discussion of Restriction and Species Election Requirements

The subject application is a U.S. national stage application based on the international application PCT/US03/15991. The Office Action alleges that the inventions defined by the claims of Groups I-III, and the alleged species encompassed thereby, do not relate to a single general inventive concept under PCT Rule 13.2 because they lack the same "special technical features." Under PCT Rule 13.2, a group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature. PCT Rule 13.2 defines the term "special technical features" as meaning those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art (see M.P.E.P. § 1893.03(d)).

All of the claims recite scytovirin (SEQ ID NO: 1), which was isolated and purified from *Sytonema varium*. Scytovirin had not been previously identified by the prior art. Thus, the claims of Groups I-III (and each of the species embodiments) are linked so as to form a single general inventive concept. In other words, the claims of Groups I-III share a common special technical feature, which defines the contribution that each claim makes over the prior art.

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Given the special technical feature common to the claims of Groups I-III (and each of the species embodiments), a search for prior art with respect to any of Groups I-III (and each of the species embodiments) would likely uncover references that would be considered by the Examiner during the examination of the other groups. To further illustrate the overlapping subject matter of the claims, each of claims 2-77 depends directly or indirectly from claim 1. As a result, the Examiner would incur no undue burden in examining the claims of Groups I-III at the same time. See also M.P.E.P. § 803 ("If the search and examination of an entire application can be made without serious burden, the examiner *must* examine it on the merits, even though it includes claims to independent or distinct inventions" (emphasis added)).

Accordingly, Applicants respectfully submit that the restriction and election of species requirements are improper and request that they be withdrawn.

Conclusion

Applicants respectfully request withdrawal of the restriction and species election requirements. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned agent.

Respectfully submitted,



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